

# Hawaii Wave Resource Data

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# U.S. Wave Energy Resource Assessment

- U.S. Department of Energy supporting assessment of wave energy resource for:
  - Atlantic Coast, Gulf of Mexico, Pacific Coast
  - Alaska and Hawaii
  - Puerto Rico
- Electric Power Research Institute is lead agency for project
  - Virginia Tech is responsible for preliminary wave resource assessment
  - NREL responsible for validation of preliminary assessment

## U.S. Wave Energy Resource Assessment (cont)

- Wave energy resource assessment methodology
  - Based on NOAA's Wavewatch III model data
  - Wave energy will be assessed using wave spectra data
    - More exact than using general sea state parameters
  - Data from selected buoys will be used to modify Wavewatch III data
- NREL will validate preliminary results using data from buoys not used to develop preliminary wave resource data

## U.S. Wave Energy Resource Assessment (cont)

- Wave energy resource will be calculated along selected lines
  - 20 m depths (southern Atlantic Coast, Gulf of Mexico, Beaufort Sea)
  - 50 m depth everywhere
  - 50 nautical miles from coast
  - 200 m depth if within the 50 nautical mile boundary
- Wave resource data will be added to NREL's GIS offshore wind resource database
- Offshore resource database will be ready sometime in 2010